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(54) Title: A METHOD, AN INSTALLATION, AND A COMPUTER PROGRAM FOR ESTIMATING THE INITIAL SIZE OF A POPULATION OF NUCLEIC ACIDS, IN PARTICULAR BY PCR

(57) Abstract: In order to estimate the size of an initial population of nucleic acids in a sample of interests, in particular by PCR, the following steps are performed: (a) providing a model of the effectiveness of the PCR, the model comprising a constant stage followed by a non-constant stage, the stages being united b a changeover region having a changeover index; (b) using the model of effectiveness to express a relationship between the changeover index and a parameter representative of the initial population size; and (c) determining the changeover index by comparison with the experimental measurements, and deducing therefrom the initial population size in the sample of interest.

INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER
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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, BIOSIS, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	RAMAKERS CHRISTIAN ET AL: "Assumption-free analysis of quantitative real-time polymerase chain reaction (PCR) data." NEUROSCIENCE LETTERS. 13 MAR 2003, vol. 339, no. 1, 13 March 2003 (2003-03-13), pages 62-66, XP002330743 ISSN: 0304-3940 abstract page 63, right-hand column, paragraph 3 - page 65, right-hand column, last paragraph figure 3 ----- -/--	1-22

[X] Further documents are listed in the continuation of Box C.

[ ] See patent family annex.

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with Indication, where appropriate, of the relevant passages	Relevant to claim No.
A	LIU WEIHONG ET AL: "Validation of a quantitative method for real time PCR kinetics" BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, ACADEMIC PRESS, SAN DIEGO, CA, US, vol. 294, no. 2, 7 June 2002 (2002-06-07), pages 347-353, XP002319698 ISSN: 0006-291X abstract page 347, right-hand column, last paragraph - page 348, right-hand column, last paragraph page 351, right-hand column, paragraph 2 - page 352, left-hand column, last paragraph figure 2	1-22
A	SWILLENS STÉPHANE ET AL: "Instant evaluation of the absolute initial number of cDNA copies from a single real-time PCR curve." NUCLEIC ACIDS RESEARCH. 2004, vol. 32, no. 6, 29 March 2004 (2004-03-29), pages E56.1-E56.6, XP002330744 ISSN: 1362-4962 the whole document	1-22
A	PFAFFL M W: "A new mathematical model for relative quantification in real-time RT-PCR." NUCLEIC ACIDS RESEARCH. 1 MAY 2001, vol. 29, no. 9, 1 May 2001 (2001-05-01), pages E45.2002-E45.2007, XP002330745 ISSN: 1362-4962 the whole document	1-22